

CLAIM AMENDMENTS

1. (currently amended): A compound comprising a polysaccharide having at least two sialic acid units linked 2.8 and/or 2.9 to one another and having a pendant moiety linked to at least one terminal unit derived from a sialic acid unit which includes a functional group selected from N-maleimide-~~groups~~, vinylsulphone-~~groups~~, N-iodoacetamide-~~groups~~ and orthopyridyl disulphide ~~groups~~.

2. (currently amended): A compound ~~according to~~ of claim 1 in which the pendant moiety is linked at the reducing terminal unit of the polysaccharide.

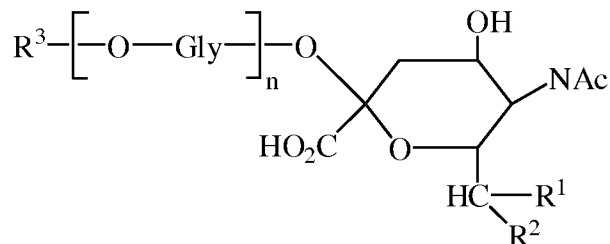
3. (currently amended): A compound ~~according to~~ of claim 1 ~~or claim 2~~ in which the pendant moiety is linked at the non-reducing terminal unit of the polysaccharide.

4. (currently amended): A compound ~~according to any preceding~~ of claim 1 in which the pendant moiety further comprises ~~an alkanediyl group~~ alkylene and/or ~~[[an]]~~ arylene ~~group and a linkage optionally in combination with a~~ and/or an oxalkylene ~~[[or]] and/or oligooxa-alkylene group which is a secondary amine linkage, a hydrazone, an alkyl hydrazide linkage or a peptide linkage and/or oligopeptide.~~

5. (currently amended): A compound ~~according to any preceding~~ of claim 1 in which the functional group is N-maleimido.

6. (currently amended): A compound ~~according to any preceding~~ of claim 1 in which the polysaccharide is a polysialic acid, ~~preferably consisting substantially only of sialic acid units.~~

7. (currently amended): ~~[[A]] The compound according to~~ of claim 1 which has the formula



~~in which one of the following groups of definitions apply wherein:~~

~~[[i)] (a) R¹ is H or -CHOHCH₂OH, and R² is OH, [[and]]~~

~~R³ is [[either]] -CH₂CHR⁴R⁵ or -CH(CH₂OH)CHR⁴R⁵ in which wherein R⁴ and R⁵ together represent =N-NR⁶ or R⁴ is H and R⁵ is -NR⁶R⁷ in which R⁶ is an organic group comprising the said pendant functional group or is H, and R⁷ is H, or R⁶ and R⁷ together are a 1,3-but-2-enedioyl group; or~~

~~[[ii)] (b) R¹ and R² together represent =N-NR⁶ =N-NHR⁶ or R¹ is H and R² is -NR⁶R⁷ in which R⁶ is an organic group comprising the said pendant functional group or is H, and R⁷ is H or R⁶ and R⁷ together are a 1,3-but-2-enedioyl group;~~

~~[[Gly-O]] O-Gly is a glycosyl (saccharide) group;~~

~~n is 0 or more 1-50; and~~

~~Ac is acetyl.~~

8. (currently amended): A compound ~~according to~~ of claim 7 in which ~~each Gly~~ each O-Gly is a sialic acid unit.

9. (currently amended): A compound ~~comprising a polysialylated~~ protein with at least one ~~[[free]] cysteine unit [[and,]] linked through a thioester bond to the side chain of the cysteine unit, with a polysialic acid, through a moiety joined at one or each at least one terminal units of the unit of a polysialic acid.~~

10. (currently amended): A compound ~~according to any preceding~~ of claim 1 wherein ~~in which the polysaccharide has at least 2, preferably at least 10, more preferably at least 50 saccharide units, preferably sialic acid units 2,8 and/or 2,9 linked to one another.~~

11. (currently amended): A process ~~in which a~~ to prepare the compound polysaccharide ~~comprising at least one terminal unit which is derived from a sialic acid unit is reacted with~~ of claim 1 which comprises reacting a heterobifunctional reagent having a first functional group selected from N- maleimido ~~groups~~, vinylsulphone ~~groups~~, N-iodoacetamide ~~groups~~ N-iodoacetamido and orthopyridyl disulphide ~~groups~~ and a second functional group different from the first functional group ~~whereby~~ to a polysaccharide having at least two sialic acid units linked 2,8 and/or 2,9 to one another wherein the said second functional group reacts with a terminal sialic acid derivative unit to form a covalent bond therewith ~~and form a functional polysaccharide suitable for selective conjugation to a thiol group.~~

12. (currently amended): A process ~~according to~~ of claim 11 in which the said second functional group is a nucleophilic group, ~~preferably hydrazine.~~

13. (currently amended): A process ~~according to claim 11~~ of claim 12 in which the terminal unit of the polysaccharide has a carbonyl group which reacts with said nucleophilic group.

14. (currently amended): A process ~~according to~~ of claim 11 in which the said second functional group is an electrophilic group, ~~preferably an N-alkoxycarbonyl-imide or carbodiimide moiety.~~

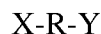
15. (currently amended): A process ~~according to~~ of claim 14 in which the terminal unit of the polysaccharide has an amine group which reacts with said electrophilic group, ~~preferably to form a peptide or a urethane linkage.~~

16. (currently amended): A process ~~according to any of claims 11 to 15~~ of claim 11 in which the reagent comprises ~~a bifunctional~~ an organic group linking the first and second functional groups.

17. (currently amended): A process ~~according to~~ of claim 16 in which the ~~bifunctional~~ organic group comprises ~~is selected from a C₂₋₁₈-alkanediyl group a C₂₋₁₈-alkylene, [[an]] arylene group, [[an]] oligo peptide or [[and an]] oligo(alkoxy)alkyl group.~~

18. (currently amended): A process ~~according to any of claims 11 to 17~~ of claim 11 in which the first functional group is a N-maleimide group.

19. (currently amended): A process ~~according to~~ of claim 11 in which the reagent has the ~~general~~ formula



in which:

X is ~~[[a]]~~ N-maleimido, N-iodoacetamido, S-vinylsulphonyl or S-orthopyridyldisulphide group,

~~R is alkane diyl~~ comprises alkylene, arylene or aralkylene-alkarylene, alkylene-oxaalkylene, or alkylene-oligooxa-alkylene or alkyl-oligopeptidyl-alkyl group or oligopeptidyl; and

Y is ~~a hydrazide~~ hydrazine, an amine or N-hydroxysuccinimide ~~group~~.

20. (canceled)

21. (currently amended): A process ~~according to any one of claims 11 to 20 in which the~~ to prepare the polysialylated protein of claim 9 which comprises reacting a maleimido-functional polysialic acid ~~is reacted~~ with a polypeptide or a protein having at least one free unprotected-Cys ~~unit~~ cysteine whereby the maleimide group forms a thioether linkage with the thiol group of ~~a Cys unit to form a polysialylated polypeptide or protein~~ said cysteine.

22. (currently amended): A process ~~in which a compound according to any of claims 1 to 6 is reacted~~ to prepare a polysialylated protein which comprises reacting the compound of claim 1 with a polypeptide or a protein having at least one ~~free and unprotected Cys unit~~ cysteine whereby the said functional group forms a thioether linkage with the thiol group of ~~a Cys unit~~ to form a conjugate of the polysaccharide with the polypeptide or protein said cysteine.

23. (new): The compound of claim 6 wherein said polysaccharide consists essentially of sialic acid units and said pendant moiety.

24. (new): The compound of claim 10 wherein the polysaccharide has at least 50 saccharide units.

25. (new): The process of claim 12 wherein the nucleophilic group is hydrazine.

26. (new): The process of claim 14 wherein the electrophilic group is an N-alkyl oxycarbonyl amide or carbodiimide.

27. (new): The process of claim 15 wherein a peptide or urethane linkage is formed.

28. (new): The process of claim 11 wherein the polysaccharide comprises at least 10 sialic acid units.

29. (new): The process of claim 28 wherein the polysaccharide has at least 50 sialic acid units.